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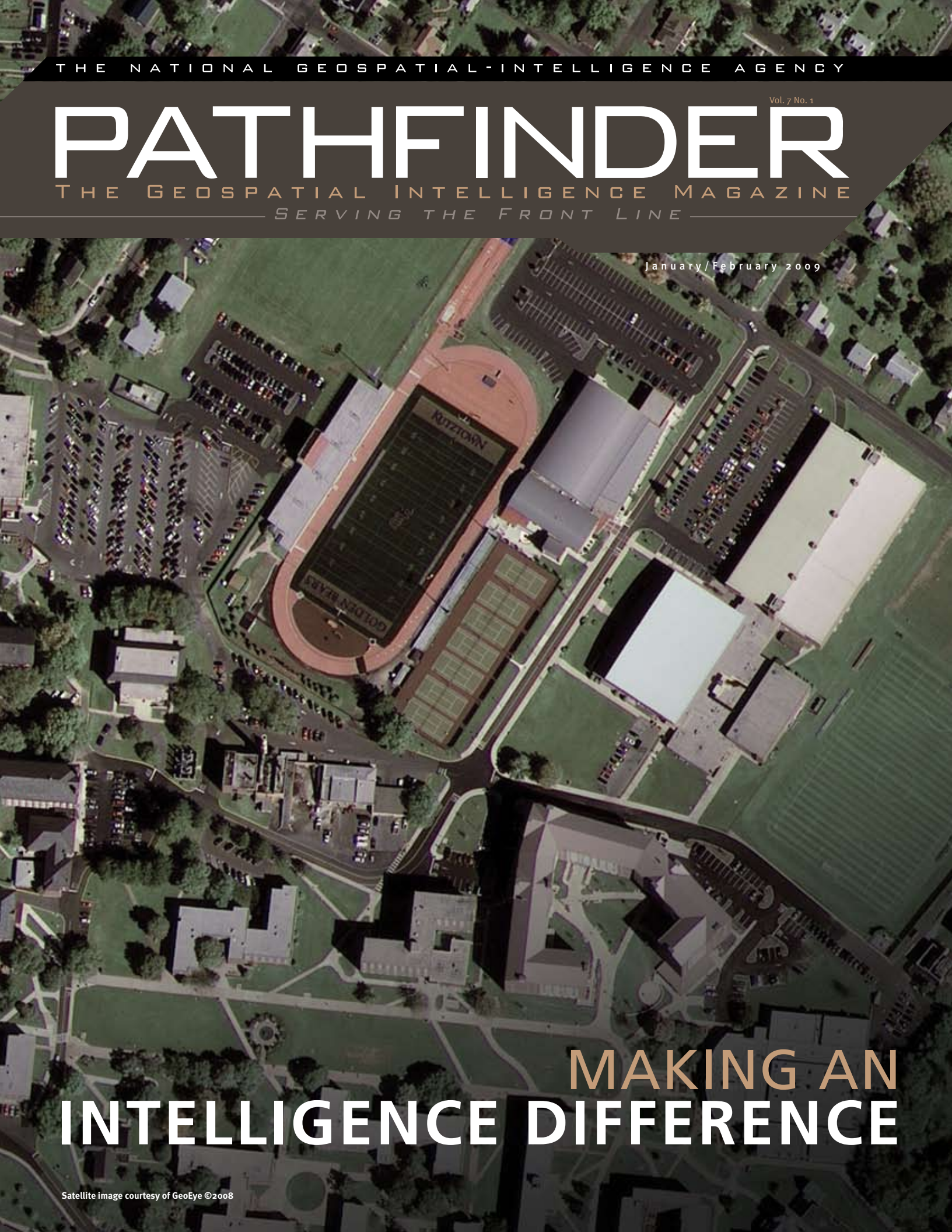

MAKING AN INTELLIGENCE DIFFERENCE

Satellite image courtesy of GeoEye ©2008

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On My Mind

GEOINT Leads the Way

Last year was another banner year in the evolution of geospatial intelligence (GEOINT). The president signed an updated Executive Order 12333, which named the director of NGA as functional manager of GEOINT. This is further evidence of the central and critical role that imagery, geospatial information and analysis play in national and homeland security. Our reach is expanding. Today, GEOINT is the foundation for many all-source products, providing the visual means on which signals intelligence, human intelligence, or open source intelligence can be depicted.

As our government transitions to new presidential leadership, the National System for Geospatial Intelligence (NSG) will continue to increase its effectiveness. The NSG has made great strides in institutionalizing standards across the community so that imagery and geospatial information can be not only stored but effectively accessed and used by analysts across the Department of Defense and the Intelligence Community. Moreover, interactions with our international partners have improved with better communication, more robust standards and far-reaching cooperation. Increased international partnerships are improving the safety of Americans and our Allies as GEOINT is proliferating to reach more users in more corners of the globe. Members of the GEOINT community have also made great strides in incorporating additional sensors into our source strategy, leveraging expanding commercial imagery from new GeoEye and WorldView satellites.

Creating a Decision Advantage

GEOINT serves as the eyes of our nation. It ensures our policy makers and warfighters have the decision advantage. It makes a critical difference in our ability to save lives by protecting our troops, supporting our leaders, ensuring safety at sea and in the air, and keeping America safe. GEOINT is essential to national and homeland security because it enables early warning, situational awareness and context for all intelligence activity.

In 2008, GEOINT once again proved its relevance by identifying early signs of conflict between Russia and Georgia. Violence has subsided in Iraq, in part because of the decision advantage enabled by the U.S. intelligence agencies. Domestically, GEOINT was crucial in providing the common operational picture of the flooding in the Midwest. Our analysis and data aided with damage assessments, assisted first responders and supported disaster preparation, relief and recovery. Humanitarian assistance was supported following Cyclone Nargis in Burma, Typhoon Fengshen in the Philippines and the earthquake in Sichuan Province, China. In places like Darfur, Sudan, imagery and GEOINT are making a critical difference in the planning and implementation of humanitarian relief operations. Teaming with our mission partners in support of special security events like the Olympics, the Democratic and Republican National Conventions, and the Super Bowl helped ensure the safety and security of those who attended these high-profile events. The depth and breadth of our mission set highlights the critical role we all play in combat operations, humanitarian efforts, homeland security and strategic national decision making. In 2008, GEOINT professionals once again raised the standard for excellence in preparing for and responding to world events.

Maintaining our Strategic and Tactical Edge

Challenges remain as we balance current realities with preparation for future threats. As our agency's expeditionary mission continues, our people are excelling and serving our nation in unprecedented ways. The NSG must maintain that balance of providing top-notch analysis in a forward-deployed environment, while preserving a robust reachback capability. Our people drive our decision advantage and ensure that GEOINT is available to those who need it most.

Other challenges include moving to a sensor-neutral architecture and effectively leveraging commercial imagery. The GEOINT community has made tremendous progress but still has a way to go in developing a community information technology infrastructure and integrated ground architecture. Through the expansion of industry engagement and consistent research and development investments, our community will be well-positioned to confront whatever challenges face our nation in future years.

Governance mechanisms like the Executive Leadership Group, the NSG Senior Management Council and the NGA Support Team Conference have ensured that we are in line with our overseers. Moving forward, strategic guidance such as the Vision 2015 from the Director of National Intelligence and the Defense Intelligence Strategy from the Office of the Secretary of Defense will guide our priorities and capabilities today and beyond.

NGA and the NSG are increasingly working more closely and effectively with our mission partners, and our people are making more of a difference every day. While we have many challenges ahead, thanks to the dedication of GEOINT professionals, our collective mission will remain central to the success of U.S. defense, intelligence and national security efforts.

Robert B. Murrett
Vice Admiral, USN
Director

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On the Cover

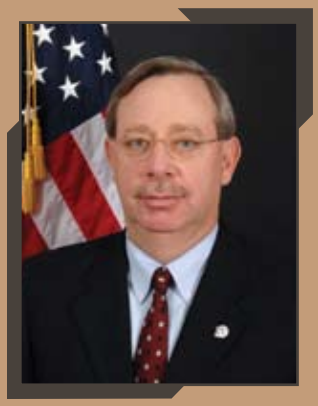
With its substantial reach, NGA routinely plays a part in numerous success stories. Many of these achievements may not be disclosed in a public forum, but among those that can are found dramatic reminders of the value of geospatial intelligence (GEOINT). Throughout 2008, the agency and its partners repeatedly demonstrated the value of GEOINT and of the advances that NGA pursues to maintain and expand its premier position within the geospatial community. These noteworthy victories are just some of the ways in which NGA fulfills its crucial role in the daily intelligence mission. The first image taken by the GeoEye-1 satellite, over Kutztown University, Pa., illustrates one such accomplishment—NGA's continuing NextView partnerships with private industry.

More to the Story?

The online Classified Pathfinder, which is accessible by members of the Intelligence Community, may include additional information and expanded sections of some Pathfinder articles. The Classified Pathfinder provides a forum for reading and discussing topics at the level of "Unclassified//For Official Use Only" and higher. For information please contact the editor, Heather Cox, at 301-227-2290.

Letter to Our Readers

Making an Intelligence Difference



Success is a relative term. It's difficult to define and impossible to grasp. Manipulate it as you wish, but there is no tried-and-true formula for gauging one's accomplishments. Is success characterized by receiving an award or in saving a soldier's life? Is it found through a promotion or in warning of a terrorist's threat before it comes to fruition?

Geospatial intelligence (GEOINT) has evolved into an extremely successful tradecraft. It joins the other intelligence disciplines (INTs) as a major player in the Intelligence Community (IC). "This [GEOINT] is the foundation … this is how we visualize SIGINT. This is how we visualize HUMINT. This is how we do all source, how [we] fuse … go to any of the fusion cells in Baghdad or in Iraq or in Afghanistan [and] you are going to see GEOINT as the baseline foundation," said Maj. Gen. John Custer, U.S. Army.

NGA is the only intelligence agency of its kind. We are the catalyst for the success of the tradecraft, and NGA's products and dedication to the warfighter prove the value of GEOINT time and time again. In this edition of the Pathfinder, our authors explore many of the accomplishments NGA has facilitated for the GEOINT tradecraft this past year.

Notably, the recent conviction of an Al Qaida terrorist demonstrated GEOINT's value, as presented in "Successful Terrorist Prosecution Employs NGA Terrain Models." Jack E. Huntley reflects on the standardization of data and technology as it enhances the interoperability of different systems across the IC. Tom King highlights the expansion of NGA's ethics standards and training to the work force.

Gail Cherochak takes a look at the new role of the Office of Corporate Communications (OCC) in this technology-driven world, as OCC transitions from traditional communication tools to multimedia-based instruments, whether they be podcasts, blogs or DVDs. Mike McManus calls attention to NGA's implementation of the new pay for performance personnel program, the Defense Civilian Intelligence Personnel System (DCIPS).

The Enterprise Operations Directorate provides an overview of the improvements to the agency's Information Technology Infrastructure, which has advanced NGA's collaboration with the IC and support to the warfighter. The Acquisition Directorate notes the successful launch of the GeoEye-1 satellite launch as it contributes to the unprecedented capabilities of space-based commercial imaging for the United States. Additionally, Maj. Marty Guthrie, U.S. Air Force, explains OMS's role in disseminating Google Earth training to the broader mission of integrating new commercial imagery capabilities.

These and other significant achievements of the past year reflect the growing awareness and reliance on GEOINT, and NGA will continue to provide the support for which it is becoming increasingly known. Our international partners are chief among those who appreciate the value of GEOINT, as the next issue of Pathfinder will explore.

Paul R. Weise
Director, Office of Corporate Communications

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GETTING PUBLISHED
All members of the geospatial intelligence community are welcome to submit articles of community-wide interest. Articles are edited for style, content and length. For details on submitting articles, send an e-mail to pathfinder@nga.mil.

EYES WIDE OPEN

FEATURE ARTICLES

Photo illustration

2008 Olympic photos by Tim Hipps, U.S. Army
GeoEye-1 launch photo by Carleton Bailie, ©2008 Boeing

Eyes Wide Open

NGA Mounts Unprecedented Support for 2008 Olympic Games

By Chip Atterbury and Karl Tammaro

As the last acrobat thrilled the crowd at the closing ceremonies of the 2008 Summer Olympic Games in Beijing, China, NGA began wrapping up an unprecedented three-year support effort that touched nearly every segment of the agency and leveraged NGA's unique relationship with federal agencies, corporate America and several international partners.

During Aug. 8-24, the games were held without any major incidents as nations mounted a monumental security effort. NGA provided geospatial intelligence analysis, data, and services for contingency planning, situational awareness, event monitoring and, when necessary, crisis response. NGA supported the efforts of the Department of State's (DOS's) Bureau of Diplomatic Security, the U.S. Secret Service, the FBI and other law enforcement agencies and DOS officials working at the Olympic Coordination Office at the U.S. Embassy in Beijing.

To satisfy its customers, NGA applied a mix of skills and functions, headed by the Office of Asia Pacific's China Division. As their primary mission, several NGA analysts worked as an "Olympics team," while many others throughout NGA provided support as a secondary mission. At the embassy, other agency analysts worked around the clock supporting ongoing security efforts. At the National Counterterrorism Center in the Washington, D.C. area, a team of NGA analysts worked 24/7 to push the latest data and information to the embassy. Analysts with the NGA Beijing Olympic Reachback Cell in St. Louis, Mo., provided the bulk of reachback support. There, a large team monitored events and incident reporting, prioritized requirements, exploited imagery, wrote reports for a shared integrated database, created geospatial graphics and 3-D fly-throughs and evaluated numerous sources for information relevant to the security of U.S. and allied athletes and citizens.

This effort was a huge success. One of the notable firsts for NGA was the scope of product dissemination. Because indigenously produced maps and graphics were scarce, NGA generated dozens of tailored products and ensured wide dissemination through an aggressive mailing campaign. From March through July 2008, over 9,000 individual products were packaged and mailed. Customers included the White House Security Office; the Transportation Security Agency; the Centers for Disease Control; the Departments of Energy, Treasury, and Health and Human Services; and the Director of National Intelligence. All products were available through the classified NGA 2008 Olympics Web site, which conveniently served as a customer-friendly repository for products, information and services and provided a direct method for receiving customers' questions and product requests.

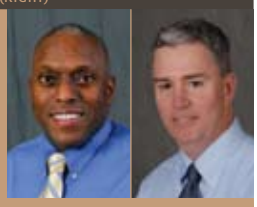
Another achievement marked a first in collaboration with Commonwealth (CW) allies. Contributing their unique perspective and intelligence capabilities, analysts from Australia, Canada, Great Britain and New Zealand jointly supported the Reachback Cell in St. Louis. The integrated CW analysts worked alongside their NGA colleagues as full-fledged members of the team while linked with their agencies back home. An expanded network architecture was used for the first time to provide the exploitation capabilities for the CW analysts within NGA facilities.

NGA's support to the Beijing games set the bar high for future Olympics support. The analysts who gained experience with Beijing are already training for the 2010 Olympic Games in Vancouver, British Columbia, and will doubtless turn in another gold-medal performance. P

Chip Atterbury (Left) and Karl Tammaro (Right)

Chip Atterbury is a staff officer in the Office of Asia Pacific. He served as NGA's executive officer for the 2008 Beijing Summer Olympic Games.

Karl Tammaro is an international officer in the Commonwealth Division of the Office of International Affairs and Policy.



GeoEye-1 Satellite Fulfills Agency Requirements

By Cyndi Wright

On Sept. 6, 2008, the 4,310-pound GeoEye-1 satel-lite was launched aboard a United Launch Alliance Delta II rocket. The launch of the GeoEye-1 satellite marks a spectacular milestone in one of the most successful collaborations with private industry in the history of NGA. GeoEye-1 is the second of two commercial satellite imaging systems and associated ground support architectures developed under NGA's NextView program. In fewer than four years from contract award, the ground segment was completed and the satellite placed in orbit. The geospatial intelligence community benefits tremendously from the launch of the satellite, designed and built to specifications supporting NGA customers with the most stringent performance parameters for image quality, accuracy and timeliness of delivery.

U.S. warfighters have stated their requirement for access to readily available, high-quality, unclassified imagery and imagery-based products in a format they can easily use and disseminate. The NextView program and two commercial imagery providers, GeoEye and DigitalGlobe, are fielding a capability that will meet and exceed those requirements. Each of the NextView class satellites is capable of producing imagery at the rate of over 500,000 square kilometers a day, 80 percent cloud-free, and with revisit rates of less than three days for each vehicle. DigitalGlobe's WorldView-1 satellite, launched in 2007, has already reached operational capability and is delivering large volumes of imagery to the Unclassified National Imagery Library (UNIL) of the National System for Geospatial Intelligence.

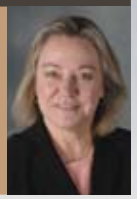
GeoEye-1 provides a quantum leap in the capabilities of space-based commercial imaging capability for the United States. It can simultaneously collect 0.41-meter ground resolution panchromatic (black-and-white) images and 1.65-meter multispectral (color) images. Designed to take digital images of the Earth from 425 miles, and moving at a speed of about 4.5 miles per second, the satellite camera can distinguish objects on the Earth's surface as small as 16 inches in size. GeoEye-1 data uses the National Imagery Transmission Format (NITF) 2.1, the standard for imagery and related products within the Intelligence Community. The new NITF 2.1 features improved compression, providing better access and faster exploitation to users with lower bandwidth and limited storage.

GeoEye-1 imagery includes a NextView license that makes dissemination to third parties virtually seamless and painless for the end user. U.S. warfighters can readily share commercial imagery with coalition partners for counterproliferation, counterterrorism, mission planning and damage assessment, thereby expanding the military's concept of intelligence collaboration beyond national borders. Because of its unclassified nature, high-resolution commercial imagery also supports a wide variety of other missions and customers, such as agricultural and environmental applications and humanitarian and disaster relief efforts. (Due to U.S. licensing restrictions, commercial customers receive imagery at 0.5-meter ground resolution.)

The NextView program celebrates the successful launch of GeoEye-1. NGA is very proud to be a part of this unprecedented partnership with the commercial remote sensing industry and looks forward to a long relationship of purchasing imagery, imagery services and imagery products. ⚐

The GeoEye-1 satellite after liftoff from Vandenberg Air Force Base, Calif.
Photo by Carleton Bailie, ©2008 Boeing

Cyndi Wright
is the NextView program manager in the Sensor Assimilation Division of the Acquisition Directorate, responsible for the two NextView contracts for next generation commercial imagery.



Eyes Wide Open

NGA Support Team Bolsters SOCOM's Special Operations Forces

By Juanita T. Hartbarger

The U.S. Special Operations Command (USSOCOM or SOCOM) NGA Support Team (NST) is located in Tampa, Fla., at MacDill Air Force Base, the home of its mission partner. The NST's reach, however, extends much farther because of the worldwide mission that it supports.

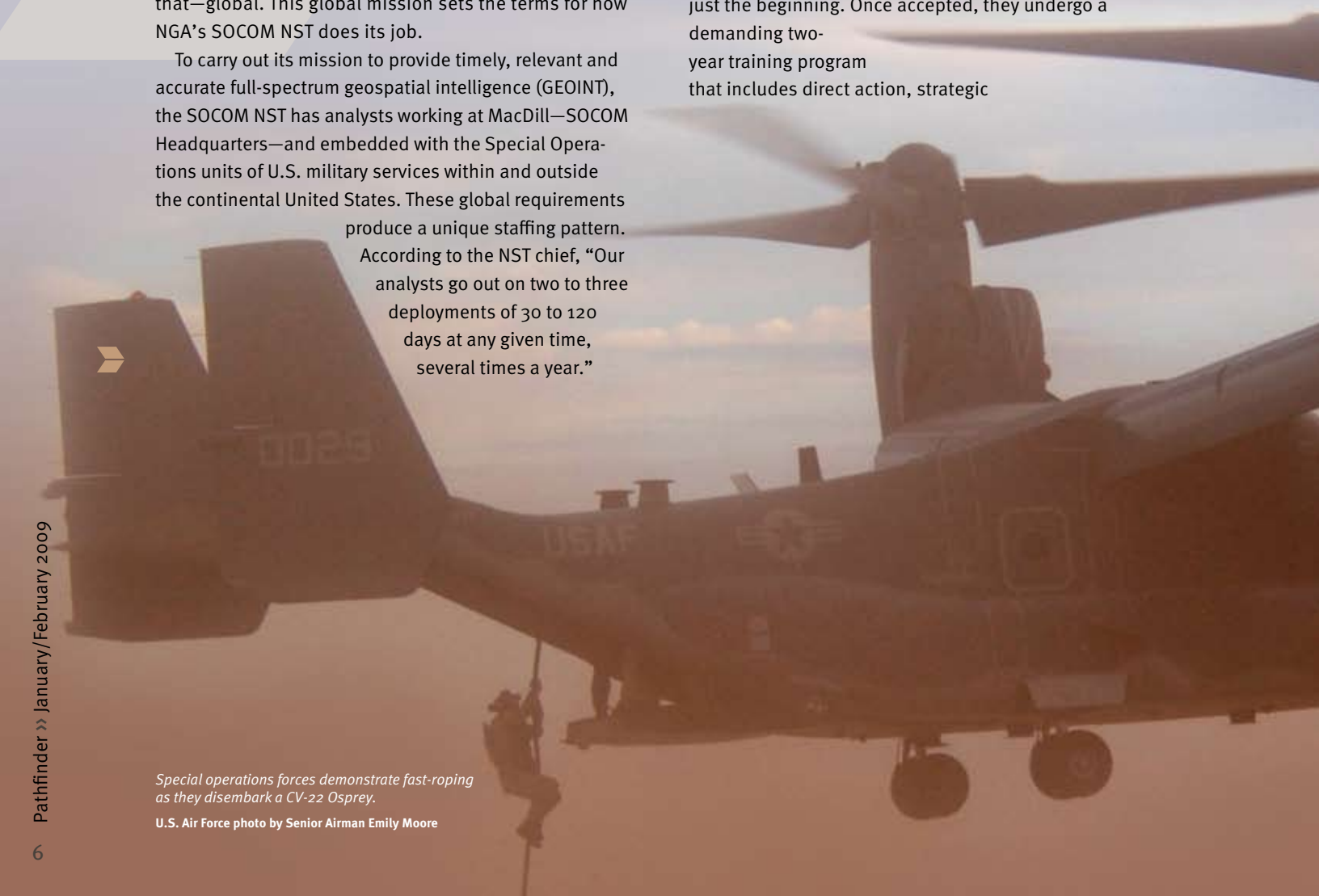
SOCOM is a unified functional command with lead responsibility for synchronizing the Global War on Terrorism (GWOT) and organizing, training and equipping Special Operations Forces (SOF) warriors to defend the United States and its interests across the globe. While much of this activity is in the Central Command (CENTCOM) area of responsibility, the GWOT is just that—global. This global mission sets the terms for how NGA's SOCOM NST does its job.

To carry out its mission to provide timely, relevant and accurate full-spectrum geospatial intelligence (GEOINT), the SOCOM NST has analysts working at MacDill—SOCOM Headquarters—and embedded with the Special Operations units of U.S. military services within and outside the continental United States. These global requirements produce a unique staffing pattern. According to the NST chief, "Our analysts go out on two to three deployments of 30 to 120 days at any given time, several times a year."

The Special Operations Forces Warrior

What makes the SOF warrior different from NGA's mission partners at other combatant commands? These soldiers, sailors, airmen and Marines, whether active duty, reserve or National Guard, are members of elite, specialized military units that can be inserted behind the lines via land, sea or air to conduct a variety of nonstandard operations.

Personnel for these units are carefully selected. According to the recent SOCOM Posture Statement, they must start with "the necessary aptitude and attitude for entry into the Special Operations community." And that's just the beginning. Once accepted, they undergo a demanding two-year training program that includes direct action, strategic

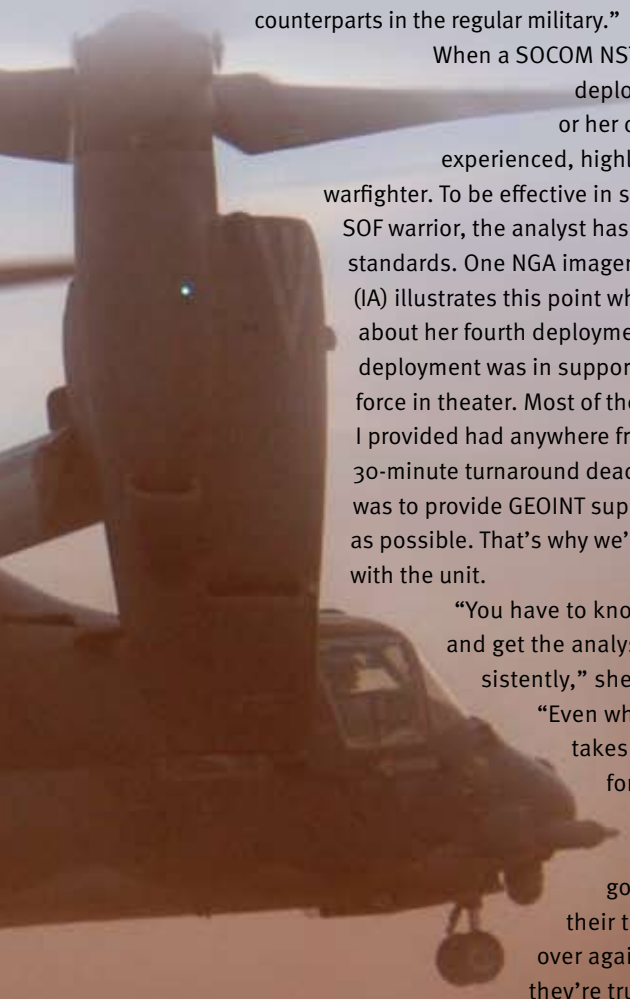


Special operations forces demonstrate fast-roping as they disembark a CV-22 Osprey.

U.S. Air Force photo by Senior Airman Emily Moore

reconnaissance, counterterrorism and theater search and rescue, along with regional and cultural orientation and, increasingly, language studies.

The rigorous selection process and the initial training set them apart. The deputy chief of the SOCOM NST characterizes the SOF this way. "SOF service members are older and hold higher rank than their regular service counterparts. Their training is more intensive, and they have three to five more years of experience than their counterparts in the regular military."



When a SOCOM NST analyst deploys, this is his or her customer—an experienced, highly trained warfighter. To be effective in serving an SOF warrior, the analyst has to meet SOF standards. One NGA imagery analyst (IA) illustrates this point when talking about her fourth deployment. "My latest deployment was in support of a task force in theater. Most of the products I provided had anywhere from 15- to 30-minute turnaround deadlines. My job was to provide GEOINT support as fast as possible. That's why we're embedded with the unit.

"You have to know your stuff and get the analysis right consistently," she continues. "Even when you do, it takes a long time for them to warm up to you. You've got to earn their trust over and over again—because they're trusting you to bring them home safe."

She has learned to think beyond the immediate request and look at how to solve the problem. "Give them more than they ask for. You have to think like the mission partner. What does he need to do his job?" Her questions include:

» Where is he going?
» What's his objective?
» What's the safest way for him to achieve it?
» What's around it that could cause a problem or conceal an adversary?

The analyst and the SOCOM warfighter work together, side by side. In the IA's words, "Your SOF mission partners become your friends. Look at the intelligence problem set like you're looking out for your friends. [If there are] more risks they have to take going in … then I'm not doing my job."

Collaboration: It Takes Work to Make It Work

Side-by-side collaboration with warrior partners is a benefit enthusiastically described by a geospatial analyst (GA) who has just begun his second deployment in theater supporting SOF warriors. "As a first-time deployer, my experience was simply incredible. The personal satisfaction I've experienced from providing mission-critical support to the warfighter is both overwhelming and self-rewarding. Knowing that my actions and products have had a direct impact on the mission was a unique experience, which is unparalleled," he notes.

"The deployment greatly accelerated my professional experience as well. I now have a greater understanding of how products should be tailored, prepared and presented and how they are applied towards tactical mission planning for the war planner and operators—the boots on the ground." He says he has gained a greater understanding of the operational deployment hierarchy, concept of operations, and mission planning, tactics, techniques and procedures.

"For every element within the task force, [the GA] provided support to virtually every person, ranging from LNO [liaison officers], interagency, all strike forces, to the commander himself," says a senior task force

Special Operations Forces Truths

The SOCOM NST mission partner is the Special Operations Forces (SOF) warrior, whether that warrior is from the Army, Navy, Air Force or Marine Corps. The SOF operator undergoes exhaustive training, deploys to remote areas and undertakes the high-risk tasks of working with indigenous personnel, coalition forces and enemy supporters to, when directed, execute global operations against terrorist networks, including kinetic and intelligence-gathering operations.

The Four Basic Truths for the SOF warrior provide a picture of the troops the NGA NST supports:

- Humans are more important than hardware.
- Special Operations Forces cannot be mass-produced.
- Quality is better than quantity.
- Competent Special Operations Forces cannot be created after emergencies occur.

official, commenting on the GA's support to the unit. "His primary support was for operational and tactical planning, target development, situational awareness and training. Typically he worked from [2:30 p.m. to 6:00 a.m.] seven days a week," he added.

Not only must SOCOM NST analysts be highly skilled, proficient in their craft and agile and resourceful in the creation and delivery of GEOINT products, but they must also work long hours.

Three-quarters of the SOCOM NST's analysts are on nonstandard duty: 24/7 recall with a one- to two-hour report. What that means is that 24 hours a day, seven days a week, the analyst must be ready, when called, to pack a bag and report for duty within one to two hours, get on a plane and head for the battlespace. In the words of the deputy NST chief, "You measure your life in two-hour segments."

The work is high-stress, the environment fast-paced. The SOCOM NST is not the place for a junior-level IA or GA. Military support experience is a key qualification for service. Once that qualification is met, only experienced and high-performing analysts need apply.

A snapshot of the IA's life during her recent deployment shows why the staffing criteria are so rigid. "There was one imagery analyst and one geospatial analyst in the unit to support 18 other analysts from [U.S.] government agencies and all-source analysts representing different countries or regions. We gave twice-daily reports on any project we were working for the team as well as support to the analysts that were assigned to outstations in other countries."

She was the only member of the team whose computer had the capability to exploit imagery. "Because of this, I was usually supporting multiple ISR [intelligence, surveillance and reconnaissance] assets at the same time. I had access to all the people on the team and could provide any of them with products to support the mission they were monitoring."

The chief of SOCOM's Geospatial Intelligence Branch testified to the effectiveness of the SOCOM–NGA collaboration. "The Command, to support our Special Operations Forces effectively, needs to look at historic data to get a baseline, and it is in this area that NGA is invaluable. Its analysts and its geospatial imagery data provide operations support, support that allows for the movement of forces. NGA's data provides context—for example, answering the important question of where the adversary might be."

The reason for the SOCOM NST's invaluable contribution is its people. According to the NST chief, the support effort can be daunting at the deployer level. It's not unusual to have an analyst running to a helicopter carrying GEOINT to a service member about to go out on a mission. "We have amazing analysts supporting amazing people. Special Operations units go out in small teams quietly in the night and take care of the nation's business while we're sleeping."

When they do, they're armed with timely, relevant and accurate full-spectrum GEOINT provided by the SOCOM NST. ⚐

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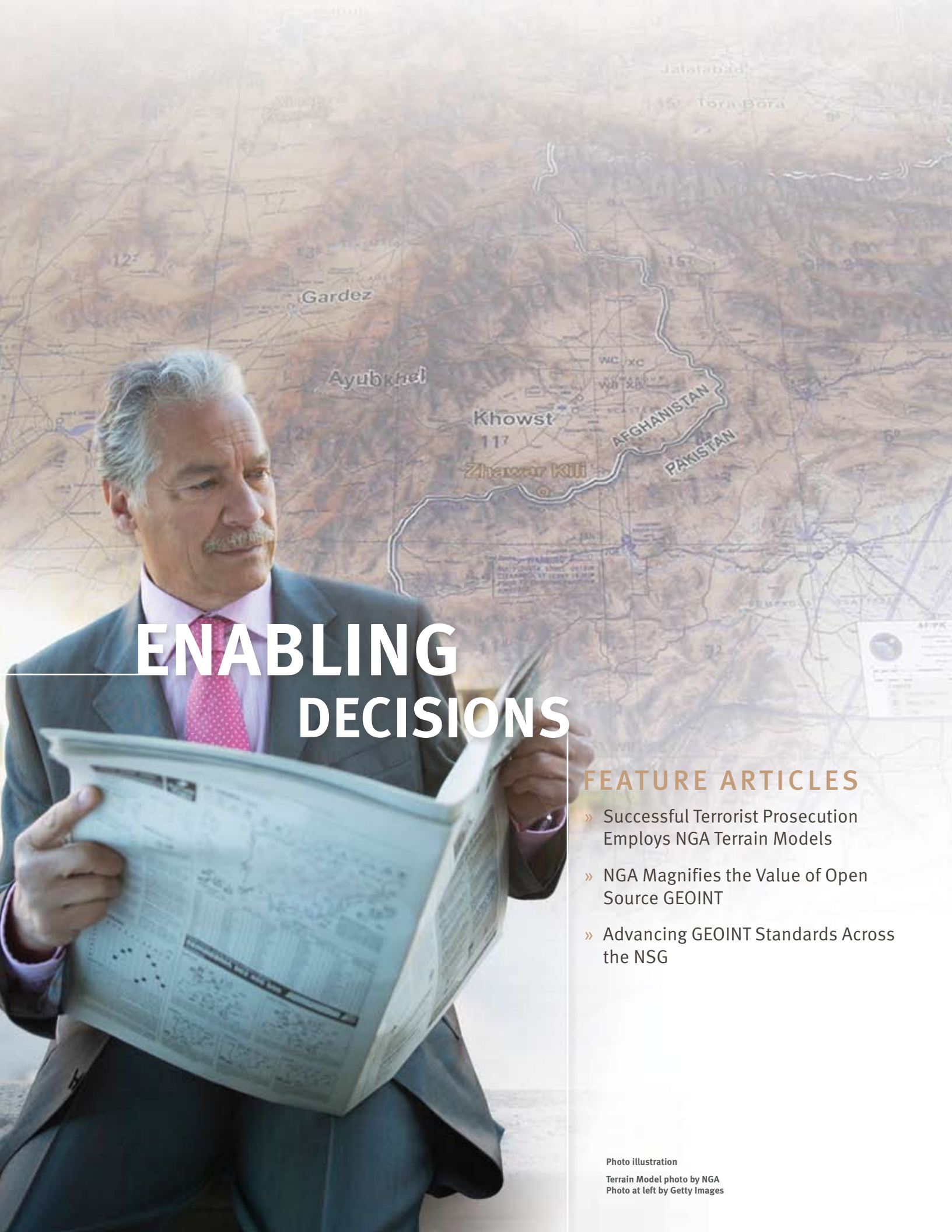
is a public affairs officer with NGA's Office of Corporate Communications.



ENABLING DECISIONS

FEATURE ARTICLES

Photo illustration

Terrain Model photo by NGA
Photo at left by Getty Images

Successful Terrorist Prosecution Employs NGA Terrain Models

By Susan Leonard

Prosecutors used models prepared by NGA during a historic trial at Guantanamo Bay, Cuba, in August 2008 in which a former member of Osama bin Laden's inner circle was convicted of providing material support for terrorism and transporting weapons. A jury of six military officers deliberated for two days before convicting Salim Ahmed Hamdan on Aug. 6.

Hamdan, believed to be about 38–40 years old, was a bodyguard and driver for bin Laden and the first detainee at the U.S. Naval Base at Guantanamo Bay to undergo a full trial. During the trial, prosecutors used 3-D terrain models developed and produced by NGA in cooperation with the Department of Defense (DOD) Office of Military Commissions (OMC), which oversees the trials of suspected terrorists held at Guantanamo, and the DOD Criminal Investigation Task Force (CITF), which conducts criminal investigations of suspected terrorists.

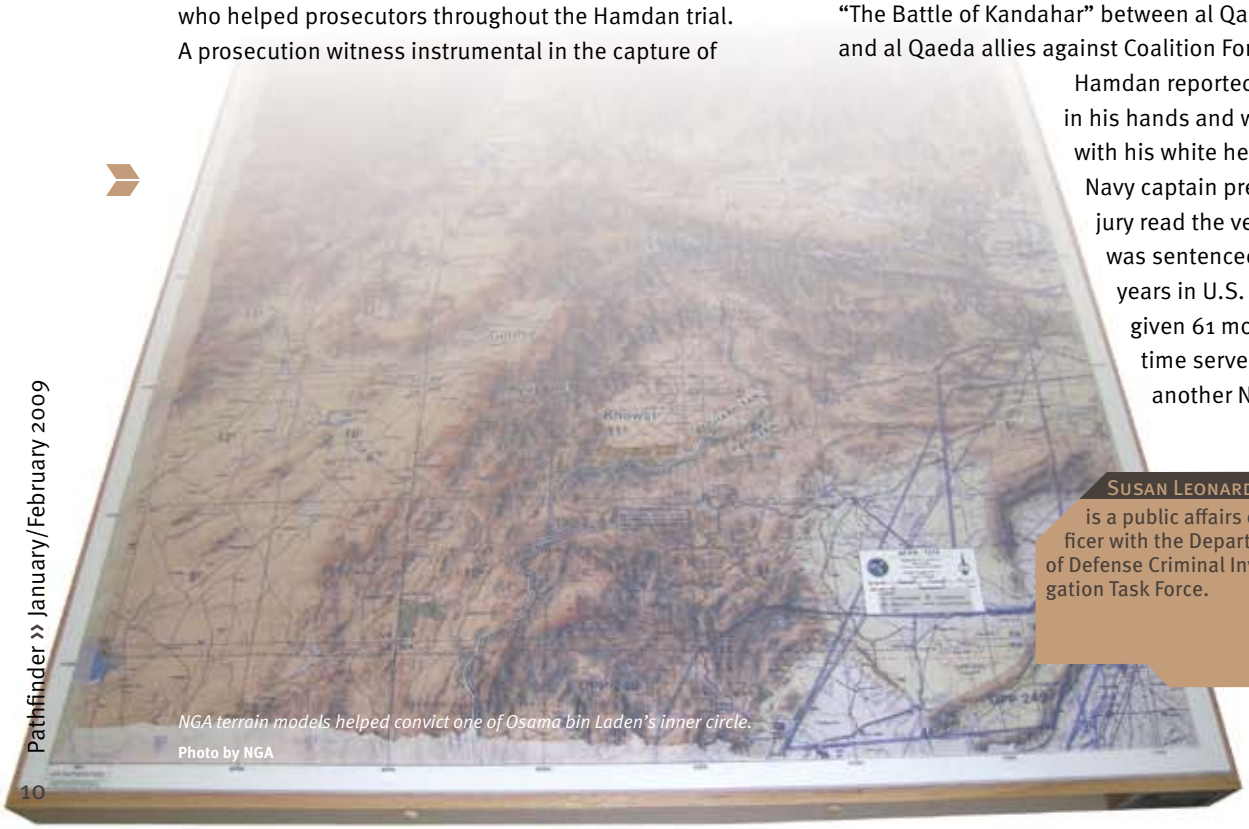
"The models have proven very useful in making testimony effective, graphic and immediate," said Tom Adams, a scientific and technical adviser for CITF who helped prosecutors throughout the Hamdan trial. A prosecution witness instrumental in the capture of Hamdan used an NGA terrain model to explain the location, events and circumstances surrounding his capture. Another prosecution witness referred to the models to show the relative locations and movements of friendly and enemy forces.

"The 3-D nature of the models was especially helpful in providing a clear and compelling picture of the general terrain and the specific areas related to the prosecution's case," Adams said. "The graphic character of the models lent them an obvious credibility."

NGA and CITF have cooperated closely and shared information to produce a number of models to support prosecutors with OMC, which expects to prosecute additional terrorism suspects in coming months.

Hamdan, a native of Yemen who was taken to Guantanamo in May 2002, was captured at a roadblock in southern Afghanistan in November 2001. Prosecutors said that when he was captured, Hamdan had two surface-to-air missiles in his car that he was transporting for al Qaeda to Kandahar on the eve of a battle known as "The Battle of Kandahar" between al Qaeda, the Taliban and al Qaeda allies against Coalition Forces.

Hamdan reportedly held his head in his hands and wiped his eyes with his white headdress after a Navy captain presiding over the jury read the verdict. Hamdan was sentenced Aug. 7 to 5 1/2 years in U.S. custody and given 61 months credit for time served by the judge, another Navy captain. ⊏



NGA terrain models helped convict one of Osama bin Laden's inner circle.
Photo by NGA

Susan Leonard
is a public affairs officer with the Department of Defense Criminal Investigation Task Force.

NGA Magnifies the Value of Open Source GEOINT

By Chris Lee

In the Intelligence Community (IC), open source refers to information that is unclassified, but of high interest within the national security arena. Where does it come from? From the Internet, books, journals, trade publications, economic and technical reports, subscription databases, newspapers, television and other sources. Given the prevailing IC view that the intelligence sources that matter most are classified sources, how valuable is open source? What does it contribute to the work of the IC in general and the geospatial intelligence (GEOINT) work of the NGA in particular?

In August 2008, NGA's Source Operations and Management Directorate stood up a Crisis Action Team (CAT) in anticipation of Hurricane Gustav. Analysts from the directorate's GEOINT Research Centers provided direct inputs to the CAT, including updated information about road, bridge and levee conditions derived solely from open sources. They also utilized open source data to assess post-hurricane damage on the intercoastal waterways and to provide detailed information on the precise locations of power outages. This support enabled decision makers and first responders to assess the overall damage from the hurricane, to gauge the magnitude of power outages and to reallocate resources based on need.

Open source GEOINT is vital to solving critical intelligence problems and supporting humanitarian and disaster assistance programs within the United States and abroad. NGA's knowledgeable research analysts use sophisticated search strategies, deep Web access techniques and numerous subscription databases to locate precise building locations in support of counterintelligence information requests, to track arms shipments in concert with counterproliferation experts, to aid in crisis support operations during natural disasters or military operations and to provide timely information for NGA's Time Dominant Operations Center.

In response to an Open Source Working Group survey finding that 90 percent of NGA's GEOINT production required open source data, NGA's Director, Vice Adm. Robert B. Murrett, established the Geospatial Open Source Management Authority (GOSMA). GOSMA is NGA's centralized functional management authority for open source geospatial activities.


Photo by Getty Images

Open source information from the Internet, newspapers and many other sources contributes significantly to solving critical intelligence problems.

Over the past year, the leadership of the Source directorate's Assessment and Global Foundations Group has worked with the GEOINT Research Centers and a five-member team from the NGA Open Source Center to craft Geospatial Open Source (GOS) policies and concepts of operations. The products facilitated the development of training programs and the mission, goals and objectives for NGA's geospatial open source activity. The team also laid the foundation for establishing and staffing a GOS center of excellence to serve as the steward for GOS within NGA and within the National System for Geospatial Intelligence, the GEOINT community comprising intelligence agencies, the U.S military, international partners and U.S. civilian agencies.

Although the IC exploits classified intelligence sources, the increasingly significant contributions and successes of open source GEOINT demonstrate how vital this intelligence collection method is in developing timely and accurate intelligence products. For that reason, NGA has become a leader in integrating open source GEOINT into its operations, thus making GEOINT an essential element in today's multi-intelligence environment. P

Chris Lee
is the acting deputy director of the Source Operations and Management Directorate GEOINT Research Office.

Advancing GEOINT Standards Across the NSG

By Jack E. Huntley

As the functional manager for geospatial intelligence (GEOINT) standards and architecture, NGA's Chief Information Officer (CIO) is committed to developing a standards-based enterprise architecture for the National System for Geospatial Intelligence (NSG). Without adherence to standards, data cannot be readily shared across different systems. Standards enable rapid deployment of new technology into existing systems and allow support for future complex requirements. In 2008, the Office of the CIO continued to work with standards experts and program managers to reduce the time required for systems to become operational, as well as improve the effectiveness of new technology while reducing costs.

Under the Office of the CIO, the National Center of Geospatial Intelligence Standards (NCGIS) is responsible for standards management for the NSG and champions the importance of data interoperability and standards. The NCGIS provides oversight to many working forums, such as the Geospatial Intelligence Standards Working Group (GWG), where NSG representatives exchange ideas and resolve issues surrounding standards. A close partner of the GWG, the NGA Interoperability Action Team (NIAT) promotes the GEOINT data interoperability necessary for any analyst across the NSG to fully exploit data regardless of the source. The NIAT team works with standards experts and systems program managers to provide support in integrating capabilities between different systems by identifying the appropriate standards.

The story of Constant Hawk, a state-of-the-art image analysis system, underscores the importance of data interoperability and standards. Constant Hawk first arrived in 2006 and was acclaimed as one of the top 10 new systems of that year. Intelligence analysts in Iraq used this system to successfully spot suspicious activities resulting in the early warning of potential roadside bombs and terrorist ambushes. Users immediately recognized the lifesaving applications of Constant Hawk, which generated more demand for its data. However, Constant Hawk was originally designed as a demonstration pilot, making its data formats unique to the system used in Iraq. This resulted in delays in providing intelligence products to users outside of Iraq and reduced the effectiveness of forensic analysis.

Last year, the NIAT personnel worked with the Constant Hawk program to define elements, data formats and metadata (information about the data) to enable Constant Hawk data to be shared across a broad range of systems. The NIAT will continue to demonstrate the benefits of interoperability and standards through its work with the Motion Imagery Standards Board, a GWG focus group, to integrate Constant Hawk data into the full-motion video architecture.

Constant Hawk is just one example of how the Office of the CIO brings standards experts and program managers together to foster data interoperability and realize the vision of GEOINT on-demand. With technology advancing at an ever-increasing rate, standards are more important than ever. By building systems with appropriate standards, NGA and its partners increase the value of existing systems and better position the NSG to meet the current and future needs of the warfighter.

Jack E. Huntley
is a branch chief in the National Center for Geospatial Intelligence Standards, Office of the Chief Information Officer, where he is a co-lead on the NGA Interoperability Action Team.

A Constant Hawk aircraft conducts a test flight from Inyokern County Airport, Calif. Interoperability and standards enable Constant Hawk data to be broadly shared.

Photo by Ross Paulson

NGATUBE

NEWSBREAK

VISUALIZING INTELLIGENCE

FEATURE ARTICLES

Photo illustration
NGA photo by Rob Cox

Military GEOINT Cells Foster Closer Relationship

By Gráinne Sibley Ostrowski

In an effort to more effectively plan, program and execute geospatial intelligence (GEOINT) in support of the military services, NGA Director Vice Adm. Robert B. Murrett, in his role as the functional manager for GEOINT, has endorsed the establishment of the Service Geospatial Intelligence Element (SGE). When fully implemented, these dedicated cells of GEOINT representatives, located at NGA headquarters in Bethesda, Md., will represent each of the military services: Army, Navy, Air Force and Marine Corps.

This significant achievement marks an evolution in the overarching relationship between NGA and the uniformed services to jointly plan, program and execute GEOINT activities in support of national and tactical missions. NGA's Office of Geospatial Intelligence Management (OGM) took the lead in developing the concept of the SGE. In August 2008, the U.S. Army and the Army Geospatial Intelligence Office was the agency's first military partner to establish an SGE. The U.S. Air Force, Marines and Navy are expected to stand up their SGEs through 2009.

The advent of the SGEs should increase NGA's effectiveness at facilitating GEOINT activities with the military. Previously, NGA and the military services coordinated through various entities based on the sub-disciplines of imagery; mapping, charting and geodesy; and advanced geospatial intelligence. With established SGEs, the interests of the military services will be better represented. SGEs facilitate the services' integration into the National System for Geospatial Intelligence (NSG) by

Photo by Rob Cox

orchestrating the military's GEOINT tasking, collection, processing, exploitation and dissemination functions as well as unifying their production and capability development. Overall, the SGEs will enable NGA to better understand and be more responsive to the services' requirements and needs.

This evolving relationship between NGA and the military services represents maturation in the role of the NGA Director as the functional manager for GEOINT. As the SGEs become fully integrated, the functional manager will be in a better position to coordinate with the services and advocate on behalf of their GEOINT needs. Furthermore, the SGEs will help the NSG functional managers in a variety of ways:

- » fine-tune and develop common training
- » establish common tradecraft, data storage and other standards between the services
- » create a framework for improved GEOINT career development, progression and management
- » unify and coordinate planning efforts
- » provide improved identification and responses to the services' GEOINT needs.

Once all four services establish their cells, the completely integrated SGEs will assist in planning future GEOINT needs, facilitate coordination and collaboration and deliver GEOINT in a more effective, efficient and timely manner to military forces across the NSG. P

Gráinne Sibley Ostrowski
is a senior staff officer in the Office of Geospatial Intelligence Management. She is currently leading the GEOINT Functional Management Communication and Education campaign.

Training Increases Google Earth™ Proficiency

By Maj. Marty Guthrie, U.S. Air Force

NGA's Office of Military Support (OMS) has helped to increase the agency's knowledge and use of Google Earth™ as both a situational awareness tool and a collaboration mechanism.

OMS took on the Google Earth™ training role as an offshoot of its broader mission of integrating new capabilities within the National System for Geospatial Intelligence (NSG). OMS promotes collaboration between the military services, the U.S. Joint Forces Command (JFCOM) and NGA and provides geospatial intelligence (GEOINT) support to ensure successful operations within the NSG.

Google Earth™ allows NGA to easily share information across the Intelligence Community (IC) in a time-relevant manner while also providing a mechanism to bring information into NGA from across the IC and military forces. The integration of Google Earth™ harmonizes with NGA's first focus area, "Look outward and be the most collaborative and integrated partner with the IC and warfighter."

"One of our main objectives is to manage the seams between systems implementation and widespread acceptance of emerging capabilities," stated the chief of the OMS Integration and Interoperability Branch. "We found that most folks were capable of using Google Earth™ to view their operations area but did not understand the power of using Google Earth™ to provide situational awareness and collaborate across multiple offices."

Following implementation and to encourage acceptance, the branch stood up a team to create and begin teaching an Introduction to Google Earth™ class through the NGA College. The team developed the half-day class, a Google Earth™ training guide and informational materials in collaboration with the college, the eGEOINT office, which facilitates GEOINT services through various programs and systems, and the GEOINT Visualization Services program office, which provides the NSG with streamlined GEOINT using Google Earth™.

The team has a long-term vision for what Google Earth™ can provide the NSG. More than just a tool to show where a place is located, Google Earth™ can allow

Photo by Getty Images

users to visualize and share data quickly and efficiently at all levels of operations. It can fuse any data into a geospatial context, providing real insight into what is happening on the battlefield.

Recognizing the importance of providing the same training to NGA's external partners as they provide within NGA, the team has taught classes at JFCOM headquarters in Norfolk, Va., and at Vandenberg Air Force Base near Lompoc, Calif. At NGA, the class is offered to any interested parties within the NSG. The course material is being shared throughout the IC and the Department of Defense. The course has been successfully transferred from OMS to the NGA College and is being expanded to include lessons for all GEOINT visualization services provided by NGA.

Maj. Marty Guthrie
is deputy chief of the Office of Military Support Integration and Interoperability Branch.

Agency Extends Information Technology Infrastructure

By Neal J. Smith

NGA's Enterprise Operations Directorate (E) extended the information technology (IT) infrastructure for the National System for Geospatial Intelligence (NSG) around the globe during 2008, ensuring timely dissemination and pervasive access to geospatial intelligence (GEOINT) products for NGA and its mission partners. During disasters, operations or routine tasks, the agency's IT infrastructure and support have proven essential.

E's government and contractor team currently provides direct support to over 40 sites worldwide, delivering improved network performance, reliability, availability and stability on NGA networks through initiatives such as the Network Stabilization Initiative Phase 3, which consolidates networks and modernizes equipment; the GeoScout Network Transport Layer in St. Louis, Mo., which improves access and throughput for analysis; and Enterprise Networking and Corporate Expansion (ENCORE) 2008, which ensures personnel at non-NGA sites have access to corporate resources.

E's enhanced infrastructure capability has enabled the warfighter and first responders to access and exploit GEOINT in a timely manner via the Battlefield Information Collection and Exploitation System (BICES) to our NATO partners, Web-Based Access Retrieval Portal (WARP) to our U.S. forces worldwide, NGA Earth for first responders, and the NGA Gateway and Remote Replication Services (RRS) to improve access to analytical products and information. E has also expanded the communications support and capabilities for the U.S. Central Command area of responsibility and the Domestic Mobile Integrated Geospatial-Intelligence System (DMIGS) vehicles. The combined usage of these systems and services by first responders and deployed U.S. and allied forces has increased exponentially in 2008.

Collaboration across the agency has been dramatically enabled through improved video teleconferencing and access to personal IT devices. NGA's video teleconference (VTC) capability grew significantly, and has supported thousands of VTC sessions across NGA in 2008. Numerous Blackberries, pagers, and phones are enhancing connectivity and collaborations as well.

Photo by Getty Images

While delivering infrastructure services for today's stakeholders, E is looking toward to the future and New Campus East (NCE). During 2008, E awarded both the Interim Transition Capability (ITC) and NCE Active IT (AIT) contracts. The ITC contract will ensure NGA's business continuity during the move to NCE, and AIT will deliver IT-managed services at the new campus.

Whether supporting first responders during a natural disaster in the United States, contributing to the Global War on Terrorism or meeting the daily IT needs of NGA, E continues to find and exploit innovative technologies to ensure that the NSG's IT infrastructure reaches those who require GEOINT to improve the Intelligence Community's collective capability. P

Neal J. Smith
is a contractor at NGA serving as a consultant for the Enterprise Operations Directorate.

Multimedia Communicators Tell the NGA Story in New Ways

By Gail Cherochak

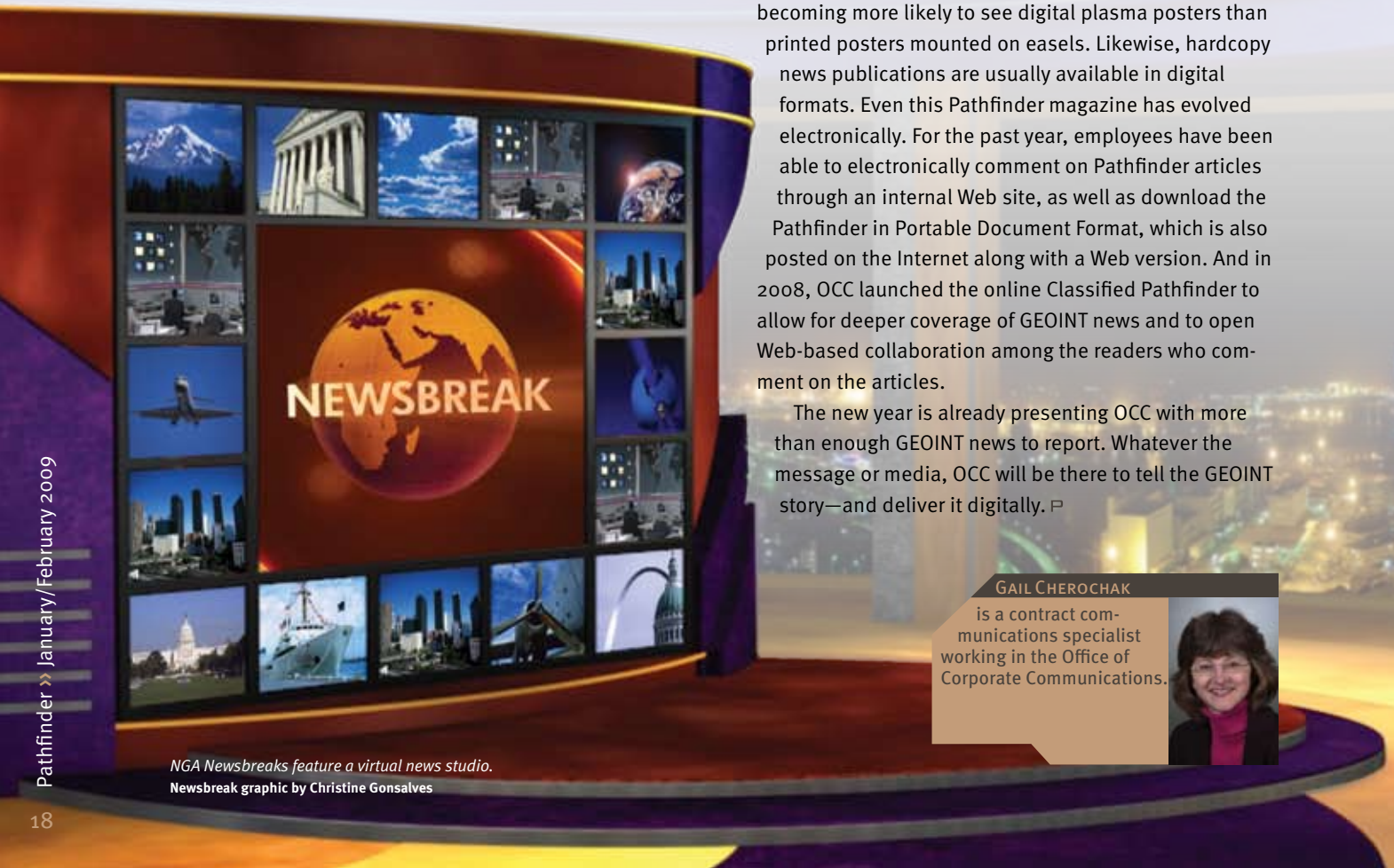
As the voice of NGA, the Office of Corporate Communications (OCC) shares NGA's news with the world and within the agency. Nowadays that means using multimedia tools to deliver the geospatial intelligence (GEOINT) news to technology-savvy audiences both outside and inside NGA.

In today's 24/7 environment, gathering and writing the news is only the first challenge. The second step—delivery—is constantly changing as technology enables people to receive their news in many ways. At NGA, once the news is packaged in any digital format, the next step is almost always to post it on a Web network for wide access. For example, as part of the agency's deployment of GEOINT Online, OCC led an agency effort to redesign NGA's Internet site (www.nga.mil) in a more public-friendly format and linked a news video to the home page.

Inside NGA, multimedia news has become part of the communications culture, and the work force receives the news in many formats. While employees have been reading the headlines on intranet news pages for several years, now they are interactively chatting on the NGA blog, which solicits input about proposed changes in the agency. Employees who enjoy audiovisual news can rely on Web-based podcasts, NGATube videos, and colorful advertisements for quick updates on everything from personnel benefits to New Campus East construction. If they want a more traditional news delivery, they can watch television-delivered NGA Newsbreaks—but the human OCC news anchor is shown standing in a virtual news studio created by the motion media team.

Hardcopy media are sharing the limelight with softcopy media, even in the cafeteria and hallways, where it's becoming more likely to see digital plasma posters than printed posters mounted on easels. Likewise, hardcopy news publications are usually available in digital formats. Even this Pathfinder magazine has evolved electronically. For the past year, employees have been able to electronically comment on Pathfinder articles through an internal Web site, as well as download the Pathfinder in Portable Document Format, which is also posted on the Internet along with a Web version. And in 2008, OCC launched the online Classified Pathfinder to allow for deeper coverage of GEOINT news and to open Web-based collaboration among the readers who comment on the articles.

The new year is already presenting OCC with more than enough GEOINT news to report. Whatever the message or media, OCC will be there to tell the GEOINT story—and deliver it digitally. P



NGA Newsbreaks feature a virtual news studio.
Newsbreak graphic by Christine Gonsalves

Gail Cherochak
is a contract communications specialist working in the Office of Corporate Communications.

REACHING FORWARD

FEATURE ARTICLES

Photo illustration

Photos by Getty Images

Research and Development Highlight Collaborative Partnerships

By Vonna Heaton and Edward T. Cope


Photo illustration by Rhonda Lee

NGA's InnoVision Directorate has always relied on its partners in the Intelligence Community (IC), the Department of Defense (DOD), industry, academia and the Commonwealth for collaborative solutions to intelligence problems as it grapples with an explosion of research and development (R&D) possibilities. InnoVision continued that tradition as it markedly expanded its R&D activities in 2008.

As the functional manager for Research, Development, Testing and Evaluation for the National System for Geospatial Intelligence (NSG), InnoVision performs basic and applied R&D and helps improve collaboration across the entire NSG. In that role, the directorate convened the first NSG R&D forum (NRF) in July 2008. The NRF brought together more than 200 R&D professionals from the 17 agencies and organizations that make up the NSG. The two-day agenda highlighted a number of promising R&D initiatives, tools and prototypes in support of current operational missions. One such initiative, NGA's Geospatial Tagging and Extraction Service (GeoTASER), delivers a new prototype Web service for forward users to automate the association of geo-coordinates to locations found in unstructured text. GeoTASER, developed in InnoVision, will allow analysts to process any type of unstructured text that contains a place name such as a text document, message traffic or an Intelink Web site. Emerging Web services such as GeoTASER will be key to enabling delivery of innovation at the speed of operations across the NSG.

InnoVision also undertook a number of important steps towards developing increased community awareness and involvement. First, a formal R&D Strategic Plan was developed to articulate the broad goals, objectives and environmental drivers that will guide the long-term future directions for advancing the geospatial intelligence (GEOINT) R&D contribution to national security. Second, an NSG R&D Roadmap was initiated as a guide for prioritization and alignment of NGA's core R&D investments for 2009 and beyond. The roadmap identifies research portfolios with near-to-long term objectives, provides metrics to assess R&D value, and will serve as the catalyst for collaboration with NSG members and partners to meet future GEOINT R&D capability needs.

The past year showed that InnoVision is not alone in pursuing the seemingly limitless potential of GEOINT R&D. Other NSG partners are also aggressively leveraging the explosion in geospatially enabled capabilities. InnoVision looks forward to continuing its collaboration with agency partners to continue moving GEOINT R&D forward in 2009 and beyond. P

Vonna Heaton (Left) and Edward T. Cope (Right)

Vonna Heaton is the director of the InnoVision Directorate and the functional manager for Research, Development, Testing and Evaluation (RDT&E) for the National System for Geospatial Intelligence (NSG).

Edward T. Cope is the functional manager executive for RDT&E for the NSG.

Ethical Standards Reinforce Agency Focus

By Thomas G. King

To reinforce NGA's 11th focus area, "maintain the highest standards of conduct," NGA's Office of General Counsel (OGC) has placed increased emphasis over the past year on its proactive role in promoting ethics and standards. This consistent attention to standards strengthens the agency by fostering the ethical environment necessary for stability and success.

OGC has expanded its ethics program in several significant ways, including newly designed ethics training and a revised NGA ethics instruction. One feature of the revised instruction will be mandatory in-person ethics training for most agency employees.

OGC also designed a "Working with Contractors" training course to educate agency personnel on the issues generated by NGA's government–contractor blended work force. Additionally, OGC has provided recurring ethics "minutes" (brief special-topic information papers) to agency employees.

Finally, OGC has hired an additional ethics attorney to further expand its ethics program in 2009. The expanded program will provide focused, one-topic training sessions covering specific issues, such as widely attended gatherings and speaking at or attending conferences. Other ethics presentations are planned as well.

The agency strives to maintain and elevate the integrity of its work and work force. OGC's initiatives of the past and future manifest NGA's dedication to sustaining the highest standards of ethical conduct. P

Thomas G. King
is the associate general counsel in the Administrative Law and Litigation Division of the Office of General Counsel.

Photo by Getty Images

Reaching Forward

New System Rewards Effective Performance

By Mike McManus

NGA's Human Development Directorate (HD) has been a key player in the development and implementation of the new Defense Civilian Intelligence Personnel System (DCIPS) process, which is being implemented across the Intelligence Community (IC) components of the Department of Defense (DOD). The new performance management system went into effect in October 2008 for the fiscal year 2009 rating cycle, promising to better recognize and reward the personnel who contribute to the fulfillment of the DOD's intelligence mission.

Given the agency's 10 years of experience with pay bands and performance pay, NGA's transition to DCIPS has been relatively simple. Many of the principles and features of NGA's previous pay system are evident in the DCIPS system. The DCIPS pay band structure is similar, and the principles of performance pay are the same. The most significant change is the new performance management system, which focuses on results and uses specific, measurable, achievable, relevant and timely (SMART) objectives designed to help establish meaningful and measurable performance criteria.

NGA has made great strides toward implementing DCIPS. The agency actively solicited employee and manager input and conducted information and training sessions on the new system. HD maintains an internal DCIPS Web site to provide basic information and updates and to address questions. Additional agency initiatives will help establish DCIPS firmly within NGA and the IC components of DOD.

Effective performance management remains essential to the mission of NGA and the IC. The full implementation of DCIPS within the IC components of DOD strongly reflects the shared commitment to maintain and reward the most effective and diligent work force to protect the nation. P

Mike McManus is a program officer in the Compensation Analysis Office of the Human Development Directorate.

DCIPS
DEFENSE CIVILIAN INTELLIGENCE PERSONNEL SYSTEM - NGA

Photo illustration
Original photos by Jupiterimages Corporation

NGA Hosts Afghan Mapping Agencies for Executive Training

By Vernon Allison, Larry Colby and Bruce Kiracofe

In June 2008, NGA hosted 11 senior managers from the Afghanistan Geodesy and Cartography Head Office (AGCHO), one senior manager from the Afghanistan National Army's (ANA's) Geospatial Topographic Directorate, and one interpreter for two weeks of executive management training. Through the course of the visit, NGA learned a great deal about the issues on the minds of its Afghan partners.

The training introduced Afghan partners to NGA's leadership values and acquainted them with American cultural values in the spirit of mutual partnership. Recognizing the management and leadership challenges that Afghan partners face, NGA is committed to guiding them in both the technical aspects of geospatial production and the development of managers and leaders.

The visit began on May 31, 2008, when an excited group of 13 Afghan visitors and two NGA escorts arrived. The Afghans met with senior NGA leaders, officials at the U.S. Geological Survey, the Department of State, Montgomery County, Md., the Maryland Mapping Department, the American Society for Photogrammetry and Remote Sensing, and Meridian House International, a nonprofit institution dedicated to public diplomacy. NGA's School of Leadership and Professional Development provided training that included a staff ride to the U.S. Civil War battlefield in Antietam, Md.

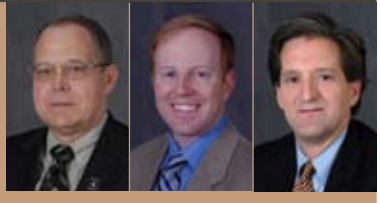
In a discussion with NGA Director Vice Adm. Robert B. Murrett, the President of AGCHO stated that he hoped that the Basic Exchange Cooperation Agreement (BECA) could improve the capabilities within AGCHO. AGCHO was most interested in seeing how NGA could work with it in the future and intended to use the experiences of NGA's global reach to support development of AGCHO's capabilities. In the same meeting, the Director of the ANA's Geospatial and Topographic Directorate shared that the ANA has been dismantled over the last 30 years and is seeking new technology to enable it to take measures against strong enemies of the future.

Murrett stated that "part of U.S. policy is to take Afghan capabilities to the highest level possible." He also stated, "NGA's long-term goal is to provide as much assistance as possible, then gradually provide no assistance with time, enabling AGCHO to have the capability to completely function independently. We have a long-term commitment."

In the daylong seminar at Meridian House International in Washington, D.C., the group examined operative American values and their influence on behaviors, both private and professional, and compared and contrasted them with operative cultural values in Afghanistan. Additionally, participants explored how values drive and motivate behavior in the workplace, discussing typical aspects of professional projects and partnerships with Americans and comparing American and Afghan expectations. Topics included planning, supervision, teamwork, meetings, conflict resolution, ethics, productivity and communication.

By the end of the visit, the Afghan and American participants had learned a great deal about leadership, NGA and each other. The Dean of NGA's School of Leadership and Professional Development left the participants with the following challenge: "A leader must understand himself as a person. What is the person like that I would like to follow? Ask yourself an important question: Why should I be led by a person like me?"

Today the geospatial partnership between NGA and AGCHO continues to flourish as joint projects, training in Afghanistan, and collaboration continue. NGA is optimistic in working to make AGCHO a first-class organization. P



Vernon Allison (Left), Larry Colby (Center) and Bruce Kiracofe (Right)

Vernon Allison is the chief of the Africa, Central Asia, Middle East and Latin America Division in NGA's Office of International Affairs and Policy.

Larry Colby is an NGA geospatial intelligence officer and program manager in the School of Leadership and Professional Development, NGA College.

Bruce Kiracofe is an NGA international desk officer supporting the Central Asia–Middle East desk within the Office of International Affairs and Policy.

NCE Tours Host 2,000 in Two Months

By Dr. Eileen M. Preisser

On Sept. 15, 2008, Vice Adm. Robert B. Murrett directed the New Campus East (NCE) Program Management Office to conduct guided tours of the NCE construction site for 2,000 personnel during fall 2008. The successful implementation of this directive illustrates NGA's commitment to its work force and to building the finest geospatial facility in the world.

Once the NCE advocacy team had formulated plans to comply with the directive, Murrett encouraged all NGA employees and contractors to take the tour and view the construction progress first hand. NCE worked with the design and construction and security teams to plan and arrange all logistics for two daily bus tours on Tuesdays and Thursdays from Oct. 6 through Dec. 11.

NCE scheduled tours from all primary NGA locations in the East and worked with each of the agency's key organizations to manage individual tours. Tour bus passengers enjoyed NCE videos produced by the Office of Corporate Communications during travel to and from the site.

Upon arrival at NCE, passengers were provided with protective gear and a brochure and map of the site as they followed an NCE tour guide to the specially created, open-air observation point where they observed the ongoing construction. The guides shared information on the construction, pointed out the various buildings being erected and answered questions.

Two themes seemed to impress many of the 2,000 people who took the tour. First, many noted that the size of the NCE construction site was larger than anticipated. Second, those who attended the NCE Groundbreaking Ceremony in September 2007 were stunned by the progress to date and the speed with which the project is proceeding.

The experience firmly emphasized NGA's investment in its work force. That the project is both on time and within budget demonstrates NGA's commitment to the agency's future.

Dr. Eileen M. Preisser
an NGA geospatial intelligence officer, is assigned to the New Campus East Program Management Office to direct the NCE Advocacy effort.

Photo by Larry Franklin

GEOINT: VISUALIZING INTELLIGENCE

Robert B. Murrett
Vice Admiral, USN
Director, NGA

GEOINT: The Nation's Eyes

Intelligence is an all-sensory experience with GEOINT as the nation's eyes.

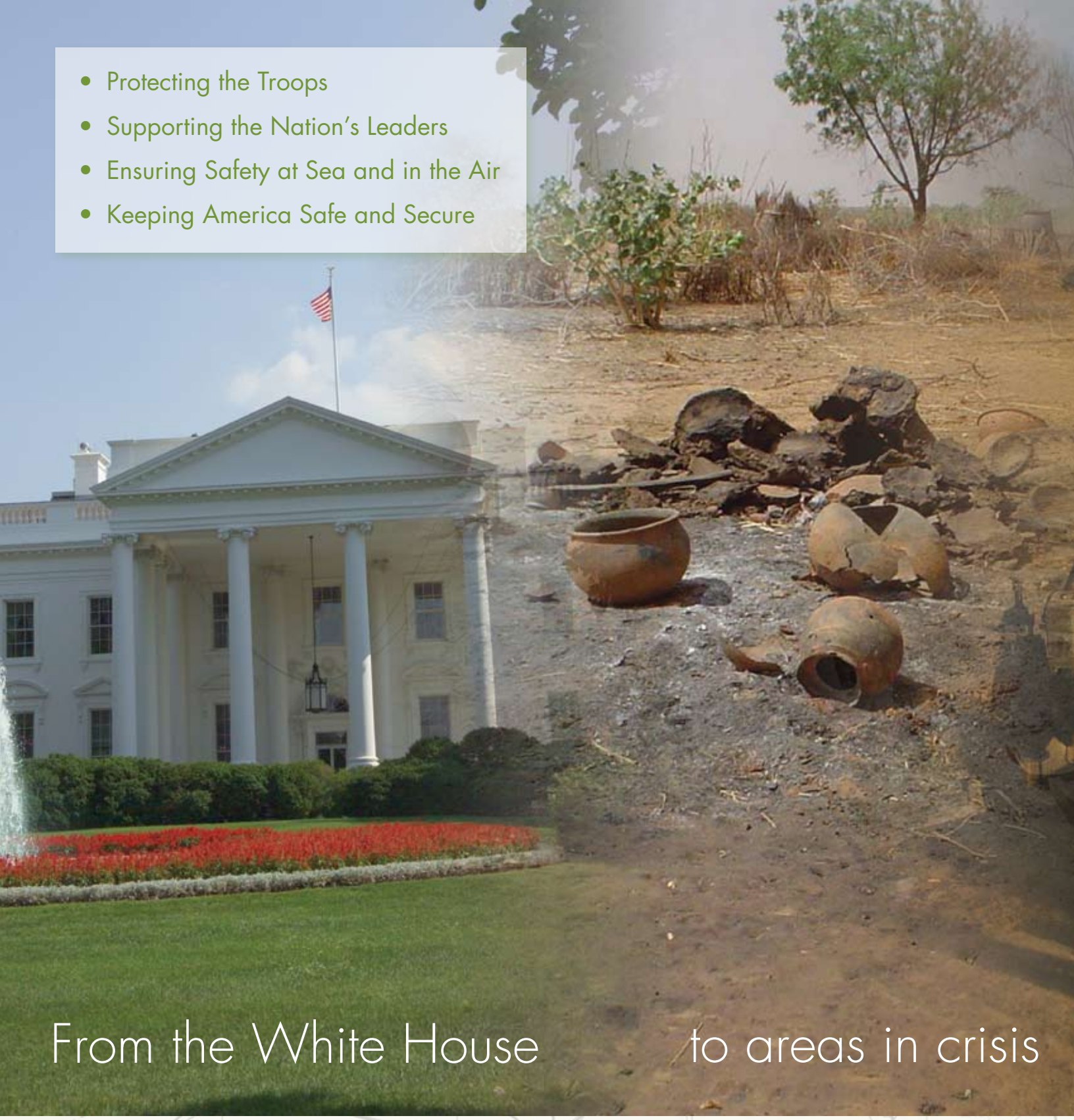
- It's visual—turning data and information into intelligence.
- It provides the decision advantage—moving operations from decision to action.
- It's perspective—answering the *what*, *where* and *when*.

When you fuse geospatial information, imagery, and imagery intelligence together, you get GEOINT. You get the terrain information, a visual of the area, and the context of the situation. GEOINT tells you "where" something or someone is, "what" it is, and "why" it is important—all in one product!

"This is the foundation...this is how we visualize SIGINT. This is how we visualize HUMINT. This is how we do all source, how [we] fuse...go to any of the fusion cells in Baghdad or in Iraq or in Afghanistan [and] you are going to see GEOINT as the baseline foundation."

–Major General John Custer, U.S. Army, Commander USAIC and Fort Huachuca

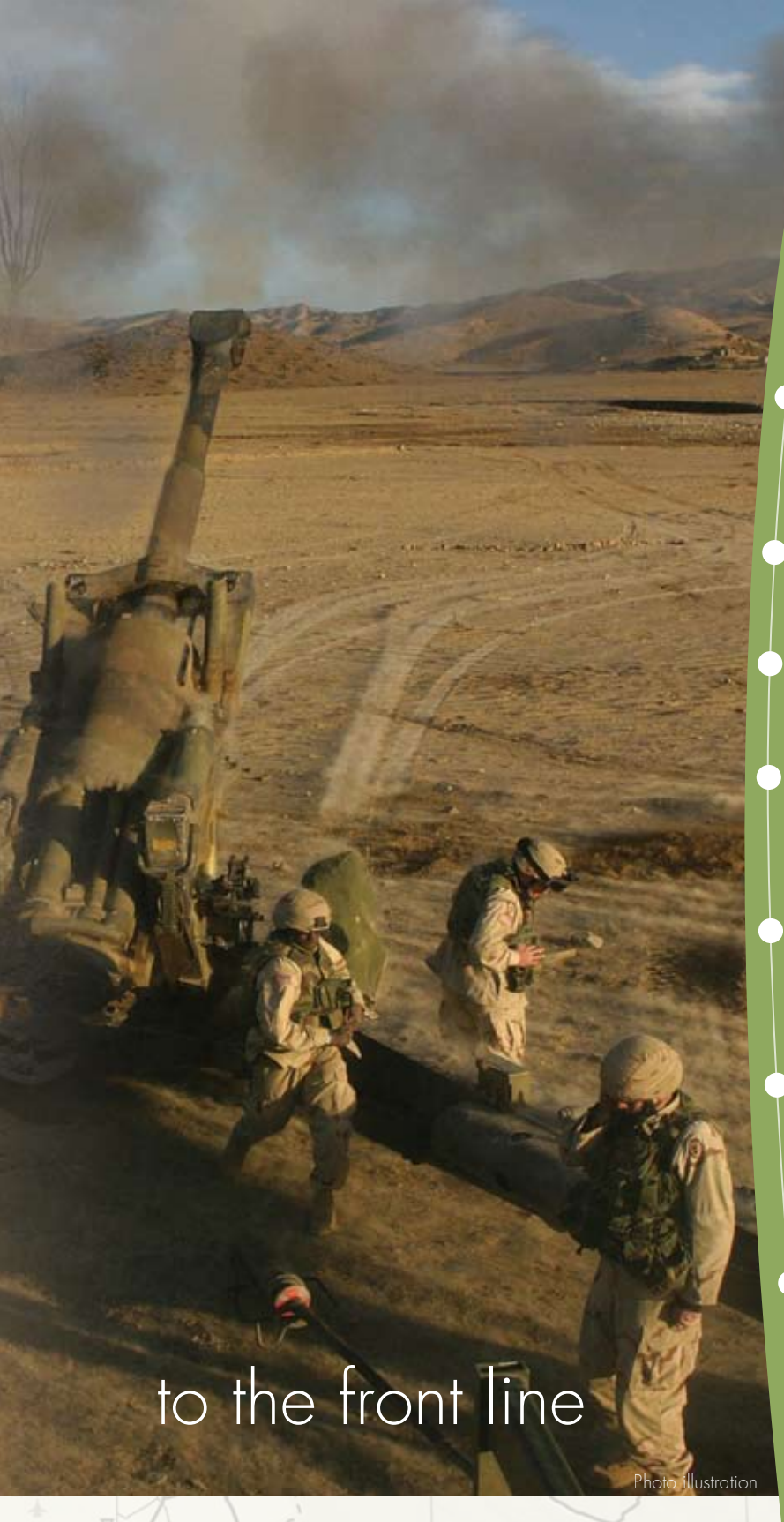
- Protecting the Troops
- Supporting the Nation's Leaders
- Ensuring Safety at Sea and in the Air
- Keeping America Safe and Secure



From the White House to areas in crisis

GEOINT *makes a*

critical difference *in* **S**



to the front line

Photo Illustration

GEOINT: Visualizing Intelligence

- **1804–May**—Lewis and Clark Expedition from St. Louis through Louisiana Territory to gather intelligence and map expanses of the area
- **1861–June**—Introduction of balloons for aerial observation during Civil War campaigns in Virginia
- **1956–June**—First successful U2 operations over Poland and East Germany
- **1960–August**—Corona launch marking the first successful reconnaissance satellite
- **1962–October**—Imagery reveals unmistakable evidence of Soviet missiles in Cuba
- **1987**—Navstar Global Positioning System (GPS), a space-based, radio-positioning technology became operational
- **1996–October**—The National Imagery and Mapping Agency stands up to integrate geospatial, imagery, and imagery intelligence operations
- **2003–November**—Name changes to the National Geospatial-Intelligence Agency (NGA) to reflect unified mission and evolving role of the agency
- **2007–September**—NGA breaks ground at the New Campus East in Springfield, VA
- **2008–July**—EO12333 formally recognizes GEOINT as an intelligence discipline and designates the director of NGA as Functional Manager

aving lives.

GEOINT: Essential to National and Homeland Security

GEOINT is often the "behind-the-scenes" partner providing vital support to all operations with a geographic location. This quiet nature means it runs the risk of being taken for granted.

GEOINT

- Creates context for all other INTs
- Increases in power exponentially when fused with other INTs
- Is an independent INT as well as a primary source of confirmation and corroboration
- Provides early warning and situational awareness of events over high-interest areas around the world, day or night
- Is at the center of all intelligence activity for all operations with a geographic location

As the leader of GEOINT, NGA leads the defense and intelligence communities in conducting GEOINT as a team effort.

GEOINT
Everywhere
All the Time
For Everyone

WWW.NGA.MIL

MISSION

NGA provides timely, relevant and accurate geospatial intelligence in support of national security.

Photo illustration

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